IT Unit 3

Topic 1

# Organisations & Data Management

# Developing a RDBMS, p 45

1. **In which stage of the PSM does this occur?**

This occurs in the development stage

1. **What is meant by referential integrity?**

The Referential Integrity is the presence of data in foreign keys.

# Testing the solution, p 49

1. **What is the purpose of testing?**

Testing the product is done to ensure that all features and functions work correctly and that the information produced is free of errors.

1. **Distinguish between informal and formal testing.**

Informal testing occurs during the developmental stage. As software developers create a solution, they are constantly testing to see if the solution behaves according to expectations.

Formal testing involves testing the overall solution after it has been completed to see if it solves the problem. This type of testing is formalised with comprehensive documentation of each test and each test outcome

1. **What is a bench test?**

A bench test forms part of the formal testing process in which sample data that has been developed during the design stage is used to determine how the solution behaves with a range of data.

1. **What is a test plan and what are the benefits** **of having a test plan?**

A test plan is used to allow testers to check each part of the solution to ensure its proper operation.

1. **What is meant by user acceptance testing?**

The user acceptance test usually involves asking users to follow a series of steps to complete a task in the solution or interpreting the information contained in the output, then providing to the developers.

# Testing procedure:

**The test plan is used to allow a systematic check of each part of the solution to ensure its proper operation. It involves six steps (three at design stage & three at development stage:**

1. **Decide on tests to be conducted (design stage).**

Establish the tests that will be conducted: state the formula or function to be tested

1. **Determine the test data (design stage)**

Determine the test that data will be used: Specify the test data

1. **Determine expected results (design stage).**

Determine the expected results: Specify what the expected or required result is and explain what you expect this result

1. **Record results of testing (develop stage).**

Record the actual result that is generated by the solution

1. **Correct any errors (develop stage).**

Correct any identified errors

1. **Provide concluding statement (develop stage).**

Provide a concluding statement about how the formula or function works correctly

# Features to test:

1. **Testing table validation**
   1. **What is the purpose of testing validation?**

Testing validation first ensures that the data is accurate before it is entered via forms or queries are run. It is important in the testing process to choose data that will test the boundaries of the validation rule as well as the data type and even the existence of the data.

* 1. **What is the rule of thumb in testing data values?**

The simple rule of thumb is to test a value before the value itself and one value greater than the value in the validation.

1. **Testing the query selection criteria**
   1. **In testing the queries, why must the test data be chosen carefully?**

The test data must be chosen carefully to ensure that there are some records that should be returned by the query.

1. **Testing formulas and summary statistics**

It is critical to test formulas and summary statistics that occur in your queries. Choose appropriate test data so that it is easy to determine if the final result is accurate.

1. **Testing sorting, primary & secondary**

A key feature of the query is being able to display its results in an organised and usable manner. The primary and secondary sorts have to be tested. The key is to demonstrate that a sort works alphabetically or numerically.